Converter Box

ATSC / 8VSB Converter Box

ZINWELL

Digital ATSC Converter Box

User manual

“ZAT-857”

SD-ATSC

ATSC / 8VSB Converter Box

1. Safety measures 2
2. Before beginning 3
2.1 Preface 3
2.2 General specifications 3
2.3 Equipment 3
3. Description of panels and connections 4
4. First Installation 5
4.1 Installation Guide 5
4.2 Menu/Application 6
4.2.1 Simple Guide 6
4.2.2 Full Guide 8
4.3 Menu/Channel 9
4.3.1 Auto Scan 9
4.3.2 Manual Scan 10
4.4 Menu/Setup 11
4.4.1 Screen Setting 11
4.4.2 System Setting 12
4.4.3 Parental Control 12
- Lock system 13
- Country 13
- Rating Control 13
- Change Password 15
4.4.4 Closed Caption 15
4.4.5 Time Setting 16
4.4.6 Factory Default 17
4.5 Menu/Information 17
5. For everyday use 18
5.1 Power on and off 18
5.2 Program selection 18
5.3 Volume adjustment 18
6.Product photo 19
6.1 Front product 19
6.2 rear product 19
6.3 Remote control 19
7.Specification 20
7.1 RF Input Connections 20
7.2 Digital Demodulation 20
7.3 Output Connections, Video 20
7.4 Output Connections, Audio 20
7.5 Output Connections, RF 20
7.6 Features 20
8. Warranty 21

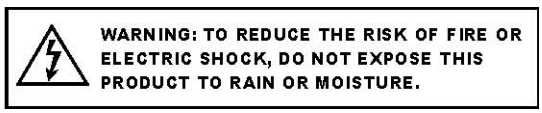
Important Safety Instructions

SD-ATSC

ATSC / 8VSB Converter Box

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug.A polarized plug has two blades with one wider than the other.A grounding type plug has two blades anda third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. Whena cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Apparatus shall not be exposed to dripping or splashing and no objects fill with liquids, such as vases, shall be placed on the apparatus.
16. To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.
17. The readily operable appliance coupler will serve as the disconnect device of this apparatus.
18. The apparatus must be connected to a mains socket outlet with a protected earthing connection.
19. Keep 10cm minimum distance around the apparatus for sufficient ventilation.
20. Spent or discharged batteries must be recycled or disposed of properly in compliance with all applicable laws. For detailed information, contact your local county solid waste authority.
21. Powering **:** 100-120V~, 60Hz, 10W max.



The lightning flash with arrow head symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: These servicing instructions are for use by qualified service personnel only. To reduce the risks of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

2.1 Preface

An ATSC Terrestrial Receiver is a product that enables you to see a large variety of channels that are supplied by a ATSC Broadcast Stations. This User manual explains everything from how to install the Receiver to the steps that need to be taken to improve various different functions. This manual also describes in detail a series of functions that are only available in this Receiver, so that you can use them properly. Please be sure to read this manual so that the Receiver is installed and used correctly, and make sure to keep it in a safe place for future reference.

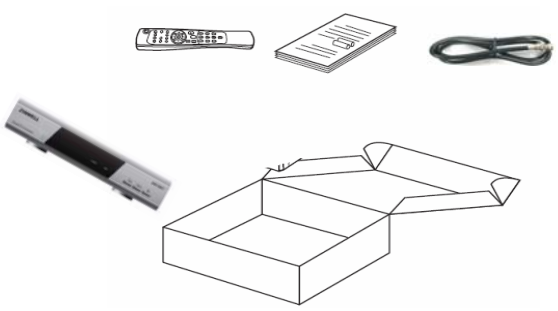
2.2 General Specifications

- Auto Sleep
- Remote control
- Automatic channel scan
- User friendly on screen Menu
- Support English, French, Spanish
- MPEG-2 Digital & Fully ATSC compliant
- Program information on the PG (Program Guide)
- Support channel 3/4 RF Modulator output via slide switch
- Parental Control is available which is supported view-controlled by access system

2.3 Equipment

Check that all of the parts are in the box.

1. Digital ATSC Converter Box ZAT-857
2. Remote control
3. “AAA”,”LR03” or “AM-4” bateries
4. User Manual
5. One RF cable



Panels and Connections

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ATSC / 8VSB Converter Box

Fig. 1 - Front Panel

Button	Function
PWR	Switches between normal operational mode and standby mode.
CH +	Goes up through the channels.
CH -	Goes down through the channels.

Fig. 2 - Rear Panel

Name	Function
ANT IN	Antenna input or ATSC signal input.
TV OUT	Support RF Modulator output to switch channel 3/4
VIDEO	Video signal output.
AUDIO R	Audio output (Right channel).
AUDIO L	Audio output (Left channel).

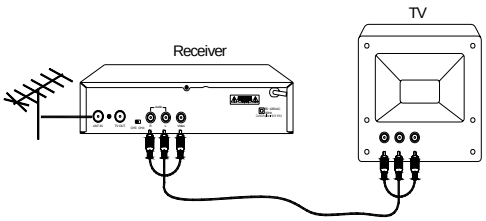
Fig. 3 - Remote control

Button	Function
⏻	Switches between normal operational mode and standby mode.
RECALL	Return to previous channel
SIGNAL	Check signal quality of the program you are watching
ZOOM	Three zoom options are made for the TV screen can view any part of the zoomed picture.
MUTE	Switches the sound off.
AUDIO	key on the remote can change audio soundtrack (Multi-language).
INFO	Push this button to find out the program information of a selected channel.
EXIT	Returns to the previous Menu within the larger menus.
MENU	Displays the main Menu onscreen.
SUBTITLE	Select and switch to the program of which you would like to view the videotext information.
PG	Displays the program schedules with short description on the TV screen
◀ , ▶ , ▲ , ▼	The cursors to move through menu options.
OK	Executes the selected option in menu and enters the value in any input mode or it displays the channel list while watching a program.
VOL+、VOL-	Increases or decreases the volume.
CH-/CH+	Goes up or down through the channel numbers.
0 ... 9、100	Selection of a channel to watch. Direct input of data in menu.
-	Dash Key

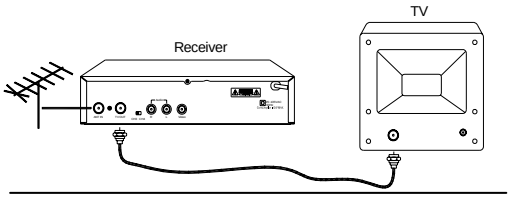
4. Installation

4.1 Install Guide

. Connect the TV and all the other equipment that is connected to the box.

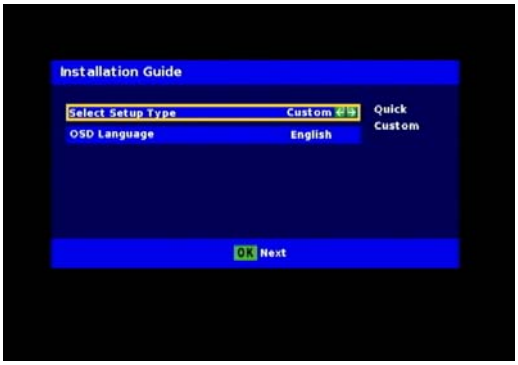


. Your receiver is equipped with a signal strength indicator to facilitate the optimum adjustment of the antenna.



. This page is to select the Setup Type between “Quick” and “Custom”. Default is “Quick”.

. User can choose “Quick” to setup quickly or select “Custom” to define following setup.

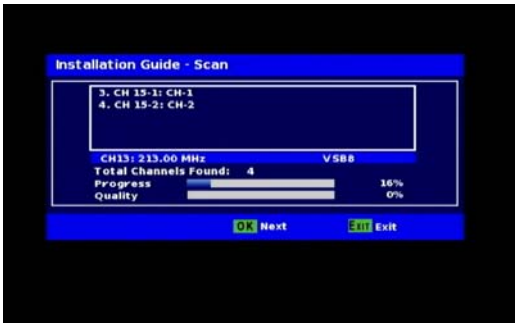


. This menu item is to choose the time zone of your country. The daylight-saving time will be considered automatically.

. Use the direction keys to select your Time Zone.

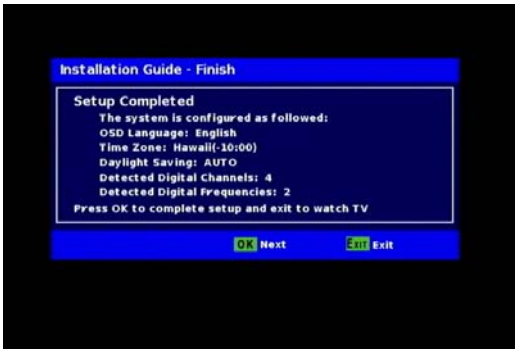
. The entire input frequency range will be scanned for programs. Please note any further messages on the screen.

. It may take up to 3 minutes to complete the search. You can terminate the search by pressing the EXIT key.



. After all the tuned programs are saved, box will stay in the tuning menu.

. Please note messages displayed on screen. Press “EXIT” to return to normal operation.



4.2 Menu/Application

.Two sub-items are in Apps menu. They are Simple Guide、Full Guide.

. Press MENU key to enter the Main Menu.

4.2.1 Simple Guide

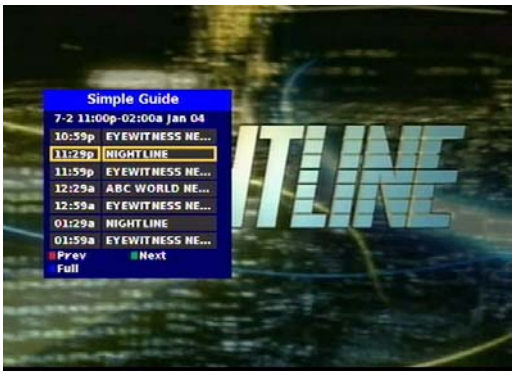
. Simple guide lists the following program’s information in current channel.

. Press MENU key to enter the Main Menu. Use the direction keys to select and press OK to confirm.

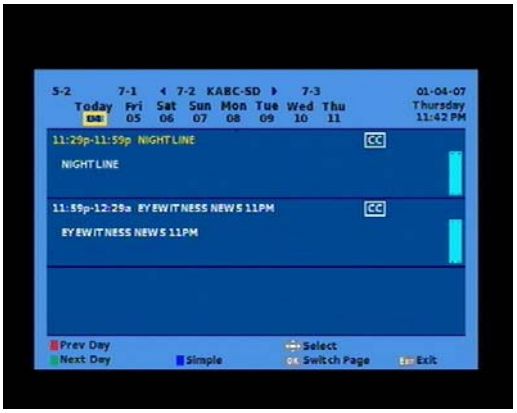
. Confirm with OK key to display the Simple Guide. Simple guide lists the followed program's information in current channel.

.Press the red button ***Prev*** key to return to the previous television program.

.Press the green button ***Next*** key to return to the next television program.



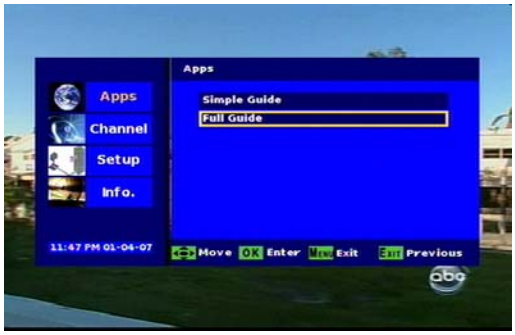
. Use the blue button ***Full*** key to switch the mode to the Detailed Guide.



4.2.2 Full Guide

. Full guide lists program's time table information for current or different channel.

. Press MENU key to enter the Main Menu. Use direction keys to select menu line Full Guide.



. Confirm with OK key to enter the Full Guide. Full Guide lists program's time table information for current or different channel.

.Press up/ down key to go to the different program in same day.

.Press the red button ***Prev*** key to return to the previous television program.

.Press the green button ***Next*** key to go to the next television program.

. Press the blue button ***Simple*** key to switch the mode to Simple Guide.

4.3 Menu/Channel

. Two scan modes are supported. Auto Scan and Manual Scan.

4.3.1 Auto Scan

. Your receiver is equipped with a signal strength indicator to facilitate the optimum adjustment of the antenna.

. Select Auto Scan in order to scan the entire frequency range for program.

. "Press MENU" key to enter Main Menu. To navigate in the Main Menu, UP/DOWN keys should be used. Auto Scan option will be highlighted.

. After all the tuned programs are saved, menu box will stay in the tuning menu.

.Press “EXIT” function to return to normal operation.

4.3.2 Manual Scan

. Your receiver is equipped with a signal strength indicator to facilitate the optimum adjustment of the antenna.

."MENU" key should be pressed to enter Main Menu. To navigate in the Main Menu, UP/DOWN keys should be used. Manual Scan option will be highlighted.

. In manual scan mode, user has to specify the channels. Application will search the channels and show the signal quality.

. Use the direction keys to select the line scan mode. The Manual Search will be displayed.

. To search a channel for programs, use the direction keys left/right to enter the channel.

. Confirm with OK key will start the scan.

4.4 Menu/Setup

. In Setup sub-menu, user can set OSD Language、Audio Language、TV…

4.4.1 Screen Setting

. Press MENU key to enter the Main Menu. Use the direction keys up/down to select menu line Screen Setting.

Screen Format:

.The appropriate picture format for your CRT TV Set is 4:3. This function only supports 4:3 picture format to be adjusted automatically for your television set.

.Use direction keys left/right to select. This is to select an appropriate picture format for your HD (High Definition) TV set, either 4:3, Letter Box, 4:3 Full, 4:3 Center.

4.4.2 System Setting

. Press MENU key to enter the Main Menu. Use the direction keys to select System Setting in menu.

. **OSD Language**

. This option allows the user to set the preferred user interface display language. All the supported languages will be listed. User can select the preferred language.

. **Audio Language**

. This menu item gives you the option of selecting the Audio language.

. **Guide Default**

.This option allows the user to set the preferred EPG Display mode. Full and Simple mode will be listed.

. **Auto Sleep**

.This function offers users to set sleep time for Box.

. **Sound Output**

.User can change the audio output among Left or Right only or L/R , Mixed both.

4.4.3 Parental Control

. Parents who want to limit their children's viewing patterns will appreciate the parental guide and rating control options.

. Press MENU key to enter the Main Menu. Use the up/down direction keys to select menu line Parental Control.

. After select the Parent Control, a window will be shown on TV and you will need to enter the password to access into the Parental Control setting page.

. Use the number key to enter the password code (factory setting: **1234**)

. **Lock System**

. Parents who want to limit their children's viewing patterns should turn on the lock system.

. **Country**

. User can set the country in this function.

. **Rating Control**

. In Rating control, you will see 2 or 3 rating options. They are TV Rating, MPAA Rating and Digital Rating. (Note: The Digital Rating item only shown when the program contains the digital rating info) You can move the selection box via direction keys and press OK to access different rating setting page to set the rating.

. Use the Parental Controls feature to lock channels, block specific movies or programs based on different available ratings.

. The receiver uses this information directly to block programs that exceed the ratings selected in a user set up procedure.

- Block Level

.The MPAA includes the following options: G,PG,PG-13,R,NC-17,X,NR

.The Digital Rating includes following options: 7+,10+,13+,16+

. In each rating setting page, use the direction key to move the selection box and press OK to switch between lock or unlock for one or more certain ratings you want to control. You can also select “Allow All” or “Block All” to set to allow or to block all the avaiable ratings.

.By press the “INFO” key twice, you can see the rating for current program.

. **Change Password**

. Use this feature to define a new password to manage.

. To change the password, proceed as below:

. Use the direction keys up/down to select. A Change Password dialog box will be displayed.

. Use the numeric key to enter the new password (factory setting: 1234)

. Use the numeric key to enter the new password again to confirm the entry.

4.4.4 Closed Caption

. Press MENU key to enter the Main Menu. Use the up/down direction keys to select menu line Closed Caption.

4.4.4.1 Closed Caption Type

. The Closed Caption [CC] is a data service which usually carries the spoken dialog in the current watching service in text format and which is usually in sync with the delivered audio. However, it is not necessary to always carry the dialog information in CC. The CC has two different formats.

(i) Analog mode (NTSC-CC)
(ii) Digital mode (ATSC-CC)

. Analog closed captions are captions formatted and presented in the current analog television system.

. Types of analog closed caption are TT1, TT2, TT3, TT4, CC1, CC2, CC3 and CC4.

. One of the benefits of Digital Closed Caption is that the display of captioning information can be customized to user needs.

. Please note these customization features only functional in digital closed caption.

. Types of Digital closed caption are Service1, Service2, Service3, Service4, Service5, Service6.

. Press MENU key to enter the Main Menu. Use the direction keys to select menu line Digital Caption Style.

Caption Size

. Captions can be displayed in different Font sizes, options are: Small、Standard or Large.

Foreground Color

. Captions can be displayed in different Background color, options are: Red, Green, Blue, Yellow, Magenta, Cyan, Black and White.

Foreground Opacity

. Opacity will allow different types of opaqueness to be set of the foreground. Options for foreground opacity are Full、High、Half、Low、Zero.

Background Color

. Captions can be displayed in different Background color, options are: Red, Green, Blue, Yellow, Magenta, Cyan, Black and White.

Background Opacity

. Opacity will allow different types of opaqueness to be set of the background. Options for background opacity are Full、High、Half、Low、Zero.

4.4.5 Time Setting

.Use the direction key to move in menu. Following settings can be made:

Time Format:
User changeable between 12H/24H time format.

Time Zone:

Use the direction keys to select your location in the Country.
Press the Back key to return to the Settings menu or press MENU key to return to normal operation. The settings will be automatically stored in memory.

Auto Daylight Saving :
Summer time function is used to provide Daylight Savings Time in summer, and automatically switch back to the normal timings in Winter. This option is functional only for countries supports Summer timer.

4.4.6 Factory Default

. Use the direction keys to select the Factory Default. Confirm by pressing OK. The message "Are you sure to load Factory Default?" will be displayed. Press OK to confirm.

4.5 Information

. This item can display the information about this box. The information is fetched from box kernel or hardware.

5. For everyday use

5.1 Power on and off :

. Turn on the receiver by pressing the On/Standby key, either on the receiver unit front panel or on the remote control.

. Press the key again either on the receiver unit or on the remote control to turn off the receiver.

.The receiver is in Standby mode after turned off.

5.2 Program selection:

.Use the CH up/down key either on the receiver unit itself or on the remote control to change the program up or down. You can change one channel by press the CH up/down key once.

5.3 Volume adjustment:

.You can adjust the volume of your receiver by pressing the VOL+ key to increase the volume or the VOL- key to decrease the volume.

.Press the Mute key to MUTE the sound, press the key again to have normal sound.

5.4 Using Universal Remote Control:

.If you want to program your existing remote control so that it can control this receiver, please use the code in the table.

Universal RCU Brand / Model / Match code	Function	Customer Code	Key Code
Radio Shack/ 15-2200 or 15-2142 NEC TV/ Code 0030	Power	0xFB04	0x08
	Ch Up		0x00
	Ch Down		0x01
	Vol Up		0x02
	Vol Down		0x03
Magnavox / REM 340 / NEC TV/Code 0024	Power	0xE718	0x08
	Ch Up		0x00
	Ch Down		0x01
	Vol Up		0x02
	Vol Down		0x03

Note: All code are using NEC protocol

6.Product Photo

6.1Front product photo

6.2 Back product photo

6.3 Remote control

7.Specification

7.1 RF Input Connections:

.Frequency Range : 57 ~ 803 MHz [CH2-CH69]
.Channel Bandwidth : 6 MHz
.F-type connector for antenna input

7.2 Digital Demodulation:

.Demodulation Type : ATSC A/53 compliance 8VSB demodulator
.Performance : ATSC A/74 compliant

7.3 Output Connections, Video:

.HD/SD Decoding Capability : ATSC 18 mode detection and support
.Aspect Ratio : 4:3 and 16:9 with letter box Pan and Scan
.Output Video : CVBS analog composite

7.4 Output Connections, Audio:

.One pairs of RCA jacks for stereo analog audio

7.5 Output Connections, RF:

.Channel Range : CH3 ~ CH4
.Channel Switch Type : Slide Switch
.F-type connector

7.6 Features:

.MPEG-2 Digital & Fully ATSC Compliant
.Selectable picture aspect ratios for 4:3 and 16:9 TV screens
.Support program information
.Support closed-caption information
.Support English, French, Spanish multi-languages
.Support user friendly OSD and easy Main Menu
.Parental Control is available which is supported view-controlled by access system
.Support RF Modulator output to switch channel 3/4

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8 Warranty

- This GMI product comes with 90 days limited warranty

Limited 90-day Warranty

GMI Warrants to original purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 90 days from the date of purchase from GMI. This Warranty does not apply to any product of part thereof which , in the opinion of the GMI, has suffered or been damaged through alteration, improper installation, mishandling, misuse, neglect, accident, or by removal or defacement of the factory serial number/bar code labels.

This Warranty is in lieu of all other express Warranties or liabilities. Any implied Warranties, including any implied Warranty of merchantability, shall be limited to the duration of this written Warranty. Any action for breach of any Warranty hereunder, including ay implied Warranty of merchantability, must be brought within a period of 90 days from the date of original purchase. In no case shall GMI be liable for any consequential or incidental damages for breach of this or any other Warranty, express or implied, whatsoever. No person or representative is authorized to assume for GMI any liability other than expressed herein connection with the sale of this product.

Some states do not allow limitations on how long an implied Warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations of exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

ZINWELL Co., Ltd

V1.0

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